

FORM PTO-1390 (Modified)
REV 11-2000

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

**TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. 371**

112740-354

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR

09/979532

INTERNATIONAL APPLICATION NO.

PCT/DE00/01505

INTERNATIONAL FILING DATE

12 May 2000

PRIORITY DATE CLAIMED

17 May 1999

TITLE OF INVENTION

**METHOD FOR CONVERTING A THREE-PARTY TELECOMMUNICATIONS CONNECTION WHICH IS
SWITCHED VIA THE PUBLIC COMMUNICATIONS NETWORK INTO A TWO-PARTY TELECOMMUNICATIONS
CONNECTION**

APPLICANT(S) FOR DO/EO/US

Volker Henz et al.

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (24) indicated below.
4. ☒ The US has been elected by the expiration of 19 months from the priority date (Article 31).
5. ☒ A copy of the International Application as filed (35 U.S.C. 371 (c) (2))
 - a. ☒ is attached hereto (required only if not communicated by the International Bureau).
 - b. ☐ has been communicated by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
 - a. ☒ is attached hereto.
 - b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
 - a. ☒ are attached hereto (required only if not communicated by the International Bureau).
 - b. ☐ have been communicated by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☐ have not been made and will not be made.
8. ☒ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
10. ☐ An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).
11. ☒ A copy of the International Preliminary Examination Report (PCT/IPEA/409).
12. ☒ A copy of the International Search Report (PCT/ISA/210).

Items 13 to 20 below concern document(s) or information included:

13. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
14. ☒ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
15. ☒ A **FIRST** preliminary amendment.
16. ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
17. ☒ A substitute specification.
18. ☐ A change of power of attorney and/or address letter.
19. ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.
20. ☐ A second copy of the published international application under 35 U.S.C. 154(d)(4).
21. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
22. ☒ Certificate of Mailing by Express Mail
23. ☐ Other items or information:

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR 09/979532		INTERNATIONAL APPLICATION NO. PCT/DE00/01505		ATTORNEY'S DOCKET NUMBER 112740-354	
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24. The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) :				CALCULATIONS PTO USE ONLY	
<input type="checkbox"/> Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$1040.00					
<input checked="" type="checkbox"/> International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$890.00					
<input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$740.00					
<input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$710.00					
<input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) \$100.00					
ENTER APPROPRIATE BASIC FEE AMOUNT =				\$890.00	
Surcharge of \$130.00 for furnishing the oath or declaration later than months from the earliest claimed priority date (37 CFR 1.492 (e)). <input type="checkbox"/> 20 <input type="checkbox"/> 30				\$0.00	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	3 - 20 =	0	x \$18.00	\$0.00	
Independent claims	1 - 3 =	0	x \$84.00	\$0.00	
Multiple Dependent Claims (check if applicable). <input type="checkbox"/>				\$0.00	
TOTAL OF ABOVE CALCULATIONS =				\$890.00	
Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.				\$0.00	
SUBTOTAL =				\$890.00	
Processing fee of \$130.00 for furnishing the English translation later than months from the earliest claimed priority date (37 CFR 1.492 (f)). <input type="checkbox"/> 20 <input type="checkbox"/> 30 +				\$0.00	
TOTAL NATIONAL FEE =				\$890.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) (check if applicable). <input type="checkbox"/>				\$0.00	
TOTAL FEES ENCLOSED =				\$890.00	
				Amount to be: refunded	\$
				charged	\$

a. <input checked="" type="checkbox"/> A check in the amount of \$890.00 to cover the above fees is enclosed. b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of _____ to cover the above fees. A duplicate copy of this sheet is enclosed. c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 02-1818 . A duplicate copy of this sheet is enclosed. d. <input type="checkbox"/> Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.	<div style="text-align: center;"> _____ SIGNATURE William E. Vaughan _____ NAME 39,056 _____ REGISTRATION NUMBER November 19, 2001 _____ DATE </div>
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NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

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 Chicago, Illinois 60690-1135

BOX PCT

IN THE UNITED STATES ELECTED/DESIGNATED OFFICE
OF THE UNITED STATES PATENT AND TRADEMARK OFFICE
UNDER THE PATENT COOPERATION TREATY-CHAPTER II

5

PRELIMINARY AMENDMENT

APPLICANTS: Volker Henz et al. DOCKET NO.: 112740-354
SERIAL NO: GROUP ART UNIT:
FILED: EXAMINER:
INTERNATIONAL APPLICATION NO:: PCT/DE00/01505
INTERNATIONAL FILING DATE 12 May 2000
INVENTION: METHOD FOR CONVERTING A THREE-PARTY
TELECOMMUNICATIONS CONNECTION WHICH IS
SWITCHED VIA THE PUBLIC COMMUNICATIONS
NETWORK INTO A TWO-PARTY
TELECOMMUNICATIONS CONNECTION

Assistant Commissioner for Patents,
Washington, D.C. 20231

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Sir:

Please amend the above-identified International Application before entry into
the National stage before the U.S. Patent and Trademark Office under 35 U.S.C. §371
as follows:

15

In the Specification:

Please replace the Specification of the present application, including the
Abstract, with the following Substitute Specification:

SPECIFICATION

TITLE OF THE INVENTION

20

METHOD FOR CONVERTING A THREE-PARTY TELECOMMUNICATIONS
CONNECTION WHICH IS SWITCHED VIA THE PUBLIC COMMUNICATIONS
NETWORK INTO A TWO-PARTY TELECOMMUNICATIONS CONNECTION

BACKGROUND OF THE INVENTION

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The present invention relates to a method for converting a three-party
telecommunications connection, which is switched via a public communications
network, between two subscriber lines and a further subscriber line or between two

subscriber lines and an operator's position, into a two-party telecommunications connection between the two subscriber lines. The three-party telecommunications connection is routed here via the telecommunications switching office to which the further subscriber line or the operator's position is connected.

5 The conversion of a three-party telecommunications connection into a two-party telecommunications connection is carried out in a known fashion by releasing the section of the three-party telecommunications connection between the further subscriber line or the operator's position and its telecommunications switching office. The known method is applied, for example, in the case in which a subscriber of the
10 telecommunications network, for example a customer of a bank, wishes to set up a connection to an employee of a bank at a bank branch. The connection setup to the employee of the bank is processed, for example, as follows:

 The customer of the bank sets up a connection from his/her subscriber terminal to his/her local switching office; for example in Munich. From this local switching
15 office, a connection is switched to a further telecommunications switching office, for example in Hamburg, on the basis of a call divert which is set up in the local switching office, wherein a number of operators' positions, for example of a call center, are connected to the further telecommunications switching office. The connection is finally switched from the telecommunications switching office in Hamburg to an
20 operator's position.

 A switching operator at the operator's position then searches for the call number of the employee of the bank requested by the customer of the bank and initiates a connection setup from the telecommunications switching office in Hamburg to the same local switching office in Munich or to another local switching office to
25 which the individual subscriber lines of the employees of the bank are connected. From this local switching office, the connection is finally switched through to the requested employee of the bank. After a successful connection setup from the customer of the bank to the requested employee of the bank, the switching operator brings about the conversion into a two-party telecommunications connection, wherein
30 the operator's position is released from the connection.

 The known method is also applied to the case of a multiparty service. For this purpose, the customer of the bank calls, for example, an employee of the bank at a

banking service center in Hamburg. This employee of the bank then establishes a three-party multiparty service connection to a further employee of a bank branch; for example, in Munich. After a certain period of time during the call, the employee of the banking service center is released from the three-party multi-party service connection, and in his/her local switching office in Hamburg brings about the interconnection of the section of the connection between the customer of the bank and the telecommunications switching office in Hamburg and the section of the connection between the telecommunications switching office in Hamburg and the employee of the bank branch in Munich. In this way, a two-party connection is maintained between the customer of the bank and the employee of the bank branch in Munich.

In the known method, there is, however, the disadvantage for the bank that when there is a call divert to an operator's station, for example in Hamburg, the bank has to pay for the existing telecommunications connection between the local switching office in Munich and the telecommunications switching office in Hamburg despite the fact that once the operator's position has been released from the three-party connection there is then only a call connection to the employee at the Munich branch of the bank. If there is a call transfer by the employee of the banking service center, the customer of the bank has to pay the tolls for the long-distance connections between his/her local switching office and the telecommunications switching office in Hamburg as well as between the remote switching office in Hamburg and the local switching office, for example in Munich, which is responsible for the bank branch.

Furthermore, additional resources, for example in the form of channel assignments on the connection lines and/or for the switching operation, in the telecommunications switching office itself are used up for the long-distance connections via the telecommunications switching office in Hamburg.

A method for carrying out a connection setup for a call diversion or connection forwarding in a communications network is already known (DE 196 53 622 A1). Here, when there is a call from a subscriber's station of a first communications system to a subscriber's station which is assigned to a second communications system and for which a call diversion or at which a call forwarding to a subscriber's station of a third communications system is set up or brought about, a connection to the third communications system is first set up via the second communications system. An

equivalent path inquiry is then transmitted from this third communications system to the calling, first communications system, in response to which the first communications system determines an alternative connection path (bypassing the second communications system) and causes the third communications system to change over to the alternative connection path. However, such a procedure is not readily suitable for converting the three-party telecommunications connection described above into a two-party telecommunications connection.

An object of the present invention is, therefore, to configure a method of the type mentioned at the beginning to the effect that the disadvantages explained above are eliminated.

SUMMARY OF THE INVENTION

The principle of the present invention consists in the fact that the telecommunications switching office via which the three-party telecommunications connection between the two subscriber lines, for example the subscriber line of the customer of the bank mentioned at the beginning and the subscriber line of the employee of the bank mentioned at the beginning in the bank branch, and a further subscriber line, for example of the employee of the bank in the banking service center, or an operator's position, for example of a call center, is set up, receives a request from the further subscriber line or from the operator's position and in response initiates the setting up of a new direct telecommunications connection between the two aforesaid subscriber lines (for example, customer of a bank and employee of a bank in the bank branch). This is done by virtue of the fact that the telecommunications switching office which is connected to the further subscriber line or the operator's position requests the one switching office, or one of the two switching offices, to which the two aforesaid subscriber lines are connected to set up the new telecommunications connection in accordance with a selection which is made as a function of the tariff model which forms the basis of the billing system. Furthermore, after the direct telecommunications connection has been successfully set up, the existing sections of the three-party telecommunications connection between these two subscriber lines and the further subscriber line, or the operator's position, are released. In this way, the subscribers can determine whether the originally calling subscriber pays the tolls for the new direct subscriber connection or whether the originally called subscriber pays

the tolls for the new direct telecommunications connection which is then set up from his/her telecommunications switching office.

Accordingly, a saving is made in resources, for example in the form of channel assignments upon transmission lines and/or for switching operations, in the telecommunications switching office to which the further subscriber or the operator's position is connected.

For the subscriber, for example the bank mentioned at the beginning, which makes use of the switching service via an operator's position, for example a call center, and for the calling subscriber in the case of the aforesaid three-party multiparty service connection, there is the welcome benefit that after the conversion of the three-party telecommunications connection into the two-party telecommunications connection both of them only have to pay the tolls for the direct telecommunications connection to the called subscriber.

One embodiment of the present invention discloses an alternative insofar as the two subscriber lines between which a new direct telecommunications connection is set up are connected to a common telecommunications switching office. Here, the new direct telecommunications connection must merely be switched in the common telecommunications switching office. Moreover, the calling subscriber, or the subscriber making use of the switching service, only pays tolls at the local rate in this case.

According to another embodiment of the present invention, the telecommunications switching office which is requested to set up the new telecommunications connection receives a uniquely defined ringing signal and/or the call number of the second subscriber line from the telecommunications switching office which accepts the new telecommunications connection and to which the second called subscriber line of the two aforesaid subscriber lines is connected. The new direct telecommunications connection is thus uniquely identified before the connection setup, as a result of which a correct useful channel switch-over is also ensured in the telecommunications switching office which initiates the new telecommunications connection and in the telecommunications switching office which accepts the new telecommunications connection. Moreover, this permits the correct call number of the

called subscriber of the two-party telecommunications connection to be indicated in the subscriber terminal of the calling subscriber.

Additional features and advantages of the present invention are described in, and will be apparent from, the following Detailed Description of the Invention and the
5 Figures.

BRIEF DESCRIPTION OF THE FIGURES

Figure 1 shows an exemplary flow chart relating to the method according to the present invention, in which is illustrated a telecommunications switching office VST A, a telecommunications switching office VST B and a telecommunications switching
10 office VST C.

DETAILED DESCRIPTION OF THE INVENTION

The subscriber line of the calling subscriber, for example of the customer of a bank, is to be imagined as being connected to the telecommunications switching office VST A, and the subscriber line of the called subscriber, for example of the employee
15 of the bank branch, is to be imagined as being connected to the telecommunications switching office VST C. A further subscriber line of a subscriber, for example of the employee of the bank in the banking service center, or an operator's position, for example of a call center, are also to be imagined as being connected to the telecommunications switching office VST B.

It will be assumed that there is an active three-party telecommunications connection between the subscriber line of the telecommunications switching office VST A, the subscriber line or the operator's position of the telecommunications switching office VST B and the subscriber line of the telecommunications switching office VST C. The feature of the conversion of the three-party telecommunications
20 connection into a two-party telecommunications connection is then activated via a message FAC1 (FAC = feature activation) in the switching office VST B. The telecommunications switching office VST B then informs the telecommunications switching office VST C, via the message FAC2, that the conversion of the three-party telecommunications connection has been activated. In this case, the subscriber whose
25 subscriber line is connected to the telecommunications switching office VST A pays the toll for the direct telecommunications connection which is to be newly set up between the telecommunications switching offices VST A and VST C.
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If the subscriber whose subscriber line is connected to the telecommunications switching office VST C is to pay the toll, the telecommunications switching office VST A can be informed about the conversion via the message FAC2. The following sequence of the method according to the present invention is then to be imagined as if the references VST A and VST C were interchanged in Figure 1.

The telecommunications switching office VST C transmits, in the message FAC3, a uniquely defined ringing signal, together with the call number of the subscriber line connected to it, to the telecommunications switching office VST B which forwards to the telecommunications switching office VST A a request message FAC4 to set up a new direct telecommunications connection by reference to the transferred call number relating to the telecommunications switching office VST C, the request message FAC4 containing the ringing signal and the call number. The receipt of the message FAC4 is confirmed by the telecommunications switching office VST A by the message FAC5 to the telecommunications switching office VST B. The setup of the new telecommunications connection is signaled to the telecommunications switching office VST C via the message IAM (Initial Address Message). This message also contains the ringing signal allocated by the telecommunications switching office VST C. In the telecommunications switching office VST C, the ringing signal transferred in the message IAM is now compared with the ringing signals of all the connections which have been activated in the telecommunications switching office VST C. After the section of the connection between the telecommunications switching office VST B and the subscriber line or operator's position connected to the telecommunications switching office VST C has been determined, the telecommunications switching office VST C responds with the message ANM (Answer Message) to the telecommunications switching office VST A.

If the telecommunications switching office VST C was not able to find a connection with an identical ringing signal, the procedure for setting up the new direct telecommunications connection to the telecommunications switching office VST C is aborted.

As soon as the telecommunications switching office VST A has received the message ANM, the new direct telecommunications connection is switched through to the telecommunications switching office VST C. At the same time, the user channel

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of the active section of the connection between the subscriber line connected to the telecommunications switching office VST A and the telecommunications switching office VST A, and the user channel of the active section of the connection between the subscriber line connected to the telecommunications switching office VST C and the telecommunications switching office VST C are respectively connected to the user channel of the newly set-up telecommunications connection. The section of the connection to the telecommunications switching office VST B is then released from the telecommunications switching office VST A, and the section of the connection to the telecommunications switching office VST B is then released from the telecommunications switching office VST C, and the assigned resources are thus made available. The release of the section of the connection between the telecommunications switching office VST B and the subscriber line connected to this telecommunications switching office is then also initiated via the message DISC.

If the setup of the new direct telecommunications connection fails in the method owing to a fault, the existing sections of the connections between the telecommunications switching office VST A and the telecommunications switching office VST B as well as those between the telecommunications switching office VST B and the telecommunications switching office VST C are maintained, connected together in the telecommunications switching office VST B and only the section of the connection between the telecommunications switching office VST B and its subscriber line is released.

If the telecommunications switching offices VST A and VST C are combined in one telecommunications switching office, the method operates similarly to the manner described above. The connection setup of the new direct telecommunications connection is then not carried out between the telecommunications switching offices VST A and VST C but rather processed internally in the single telecommunications switching office and the user channels of the sections of the connections to the two subscriber lines connected to this telecommunications switching office are connected together internally.

Although the present invention has been described with reference to specific embodiments, those of skill in the art will recognize that changes may be made thereto

without departing from the spirit and scope of the invention as set forth in the hereafter appended claims.

ABSTRACT OF THE DISCLOSURE

A method for converting a three-party telecommunications connection which is switched via the public communications network into a two-party telecommunications connection wherein, after the telecommunications switching office (VST B), via which a three-party telecommunications connection between two subscriber lines and a further subscriber line or between two subscriber lines and an operator's position is routed, has received a request from the further subscriber line or the operator's position, a new direct telecommunications connection is set up between the two subscriber lines and the existing sections of the three-party telecommunications connection between these two subscriber lines and the further subscriber line or the operator's position are released.

In the claims:

On page 9, cancel line 1, and substitute the following left-hand justified heading therefor:

CLAIMS

Please cancel claims 1-3, without prejudice, and substitute the following claims therefor:

4. A method for converting a three-party telecommunications connection, which is switched via a public communications network, between two subscriber lines and one of a further subscriber line and an operator's position, the three-party telecommunications connection being routed via a telecommunications switching office to which the one of the further subscriber line and the operator's position is connected, into a two-party telecommunications connection between the two subscriber lines, the method comprising the steps of:

initiating setup, via the telecommunications switching office, and after reception of a request originating from the one of the further subscriber line and the operator's position, of a new direct telecommunications connection between the two subscriber lines, wherein the telecommunications switching office requests one of two further telecommunications switching offices to which the two subscriber lines are respectively connected to set up the new telecommunications connection in

accordance with a selection which is made as a function of a tariff model which forms a basis of a billing system; and

releasing, after a successful setup of the direct telecommunications connection, existing sections of the three-party telecommunications connection which is routed via the telecommunications switching office, between the two subscriber lines and the one of the further subscriber line and the operator's position.

5. A method for converting a three-party telecommunications connection as claimed in claim 4, the method further comprising the step of:

connecting the two subscriber lines, between which the new direct telecommunications connection is set up, to a common telecommunications switching office.

6. A method for converting a three-party telecommunications connection as claimed in claim 4, the method further comprising the step of:

receiving, via the telecommunications switching office which is requested to set up the new telecommunications connection, at least one of a uniquely defined ringing signal and a call number of the second subscriber line from the telecommunications switching office which accepts the new telecommunications connection and to which the second subscriber line of the two subscriber lines is connected.

REMARKS

The present amendment makes editorial changes and corrects typographical errors in the specification, which includes the Abstract, in order to conform the specification to the requirements of United States Patent Practice. No new matter is added thereby. Attached hereto is a marked-up version of the changes made to the specification by the present amendment. The attached page is captioned "**Version With Markings To Show Changes Made**".

In addition, the present amendment cancels original claims 1-3 in favor of new claims 4-6. Claims 4-6 have been presented solely because the revisions by red-lining and underlining which would have been necessary in claims 1-3 in order to present those claims in accordance with preferred United States Patent Practice would have

been too extensive, and thus would have been too burdensome. The present amendment is intended for clarification purposes only and not for substantial reasons related to patentability pursuant to 35 U.S.C. §§101, 102, 103 or 112. Indeed, the cancellation of claims 1-3 does not constitute an intent on the part of the Applicants to
5 surrender any of the subject matter of claims 1-3.

Early consideration on the merits is respectfully requested.

Respectfully submitted,



(Reg. No. 39,056)

10 William E. Vaughan
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P.O. Box 1135
Chicago, Illinois 60690-1135
15 (312) 807-4292
Attorneys for Applicants

VERSIONS WITH MARKINGS TO SHOW CHANGES MADE

In The Specification:

The Specification of the present application, including the Abstract, has been amended as follows:

SPECIFICATION

TITLE OF THE INVENTION

Description

METHOD FOR CONVERTING A THREE-PARTY TELECOMMUNICATIONS
CONNECTION WHICH IS SWITCHED VIA THE PUBLIC COMMUNICATIONS
NETWORK INTO A TWO-PARTY TELECOMMUNICATIONS CONNECTION

BACKGROUND OF THE INVENTION

The present ~~The~~ invention relates to a method for converting a three-party telecommunications connection, which is switched via a public communications network, between two subscriber lines and a further subscriber line or between two subscriber lines and an operator's position, into a two-party telecommunications connection between the two ~~aforesaid~~ subscriber lines ~~according to the preamble of patent claim 1.~~ The three-party telecommunications connection is routed here via the telecommunications switching office to which the further subscriber line or the operator's position is connected.

The conversion of a three-party telecommunications connection into a two-party telecommunications connection is carried out in a known fashion by releasing the section of the three-party telecommunications connection between the further subscriber line or the operator's position and its telecommunications switching office. The known method is applied, for example, in the case in which a subscriber of the telecommunications network, for example a customer of a bank, wishes to set up a connection to an employee of a bank at a bank branch. The connection setup to the employee of the bank is processed, for example, as follows:

The customer of the bank sets up a connection from ~~his~~ his/her subscriber terminal to ~~his~~ his/her local switching office,; for example in Munich. From this local switching office, a connection is switched to a further telecommunications switching office, for example in Hamburg, on the basis of a call divert which is set up in the local switching office, ~~a plurality of operators's~~ wherein a number of operators' positions, for example of a call center, ~~being~~ are connected to ~~said~~ the further

telecommunications switching office. The connection is finally switched from the telecommunications switching office in Hamburg to an operator's position.

A switching operator at the operator's position then searches for the call number of the employee of the bank requested by the customer of the bank and initiates a connection setup from the telecommunications switching office in Hamburg to the same local switching office in Munich or to another local switching office to which the individual subscriber lines of the employees of the bank are connected. From this local switching office, the connection is finally switched through to the requested employee of the bank. After a successful connection setup from the customer of the bank to the requested employee of the bank, the switching operator brings about the conversion into a two-party telecommunications connection, wherein the operator's position being is released from the connection.

The known method is also applied to the case of a multiparty service. For this purpose, the customer of the bank calls, for example, an employee of the bank at a banking service center in Hamburg. This employee of the bank then establishes a three-party multiparty service connection to a further employee of a bank branch, for example, in Munich. After a certain period of time during the call, the employee of the banking service center is released from the three-party multi-party service connection, and in his his/her local switching office in Hamburg he brings about the interconnection of the section of the connection between the customer of the bank and the telecommunications switching office in Hamburg and the section of the connection between the telecommunications switching office in Hamburg and the employee of the bank branch in Munich. In this way, a two-party connection is maintained between the customer of the bank and the employee of the bank branch in Munich.

In the known method, there is, however, the disadvantage for the bank that when there is a call divert to an operator's station, for example in Hamburg, the bank has to pay for the existing telecommunications connection between the local switching office in Munich and the telecommunications switching office in Hamburg despite the fact that once the operator's position has been released from the three-party connection there is then only a call connection to the employee at the Munich branch of the bank. If there is a call transfer by the employee of the banking service center, the customer of the bank has to pay the tolls for the long-distance connections between his his/her

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local switching office and the telecommunications switching office in Hamburg as well as between the remote switching office in Hamburg and the local switching office, for example in Munich, which is responsible for the bank branch.

Furthermore, additional resources, for example in the form of channel assignments on the connection lines and/or for the switching operation, in the telecommunications switching office itself are used up for the long-distance connections via the telecommunications switching office in Hamburg.

A method for carrying out a connection setup for a call diversion or connection forwarding in a communications network is already known (DE 196 53 622 A1).

Here, when there is a call from a subscriber's station of a first communications system to a subscriber's station which is assigned to a second communications system and for which a call diversion or at which a call forwarding to a subscriber's station of a third communications system is set up or brought about, a connection to the third communications system is ~~firstly~~ first set up via the second communications system.

An equivalent path inquiry is then transmitted from this third communications system to the calling, first communications system, in response to which ~~said~~ the first communications system determines an alternative connection path (bypassing the second communications system) and causes the third communications system to change over to the alternative connection path. However, such a procedure is not readily suitable for converting the three-party telecommunications connection described above into a two-party telecommunications connection.

The An object of the present invention is ~~then, therefore,~~ to configure a method of the type mentioned at the beginning to the effect that the disadvantages explained above are eliminated.

~~This object is achieved by means of the features specified in the characterizing part of claim 1. Further embodiments of the invention are characterized in subclaims.~~

SUMMARY OF THE INVENTION

The principle of the present invention consists in the fact that the telecommunications switching office via which the three-party telecommunications connection between the two subscriber lines, for example the subscriber line of the customer of the bank mentioned at the beginning and the subscriber line of the employee of the bank mentioned at the beginning in the bank branch, and a further

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subscriber line, for example of the employee of the bank in the banking service center, or an operator's position, for example of a call center, is set up, receives a request from the further subscriber line or from the operator's position and in response initiates the setting up of a new direct telecommunications connection between the two aforesaid subscriber lines (for example, customer of a bank and employee of a bank in the bank branch). This is done by virtue of the fact that the telecommunications switching office which is connected to the further subscriber line or the operator's position requests the one switching office, or one of the two switching offices, to which the two aforesaid subscriber lines are connected to set up the new telecommunications connection in accordance with a selection which is made as a function of the tariff model which forms the basis of the billing system. Furthermore, after the direct telecommunications connection has been successfully set up, the existing sections of the three-party telecommunications connection between these two subscriber lines and the further subscriber line, or the operator's position, are released. In this way, the subscribers can determine whether the originally calling subscriber pays the tolls for the new direct subscriber connection or whether the originally called subscriber pays the tolls for the new direct telecommunications connection which is then set up from his his/her telecommunications switching office.

Accordingly, a saving is made in resources, for example in the form of channel assignments upon transmission lines and/or for switching operations, in the telecommunications switching office to which the further subscriber or the operator's position is connected.

For the subscriber, for example the bank mentioned at the beginning, which makes use of the switching service ~~by means of~~ via an operator's position, for example a call center, and for the calling subscriber in the case of the aforesaid three-party multiparty service connection, there is the welcome benefit that after the conversion of the three-party telecommunications connection into the two-party telecommunications connection both of them only have to pay the tolls for the direct telecommunications connection to the called subscriber.

One development embodiment of the present invention discloses an alternative insofar as the two subscriber lines between which a new direct telecommunications connection is set up are connected to a common telecommunications switching office.

Here, the new direct telecommunications connection must merely be switched in the common telecommunications switching office. Moreover, the calling subscriber, or the subscriber making use of the switching service, only pays tolls at the local rate in this case.

According to ~~one development~~ another embodiment of the present invention, the telecommunications switching office which is requested to set up the new telecommunications connection receives a uniquely defined ringing signal and/or the call number of the second subscriber line from the telecommunications switching office which accepts the new telecommunications connection and to which the second called subscriber line of the two aforesaid subscriber lines is connected. The new direct telecommunications connection is thus uniquely identified before the connection setup, as a result of which a correct useful channel switch-over is also ensured in the telecommunications switching office which initiates the new telecommunications connection and in the telecommunications switching office which accepts the new telecommunications connection. Moreover, this permits the correct call number of the called subscriber of the two-party telecommunications connection to be indicated in the subscriber terminal of the calling subscriber.

~~An exemplary embodiment of the invention will be explained in more detail below with reference to a drawing. Additional features and advantages of the present invention are described in, and will be apparent from, the following Detailed Description of the Invention and the Figures.~~

BRIEF DESCRIPTION OF THE FIGURES

The figure Figure 1 shows an exemplary flow chart relating to the method according to the present invention, in which is illustrated a: A telecommunications switching office VST A, a telecommunications switching office VST B and a telecommunications switching office VST C ~~are illustrated.~~

DETAILED DESCRIPTION OF THE INVENTION

The subscriber line of the calling subscriber, for example of the customer of a bank, is to be imagined as being connected to the telecommunications switching office VST A, and the subscriber line of the called subscriber, for example of the employee of the bank branch, is to be ~~imagined~~ imagined as being connected to the telecommunications switching office VST C. A further subscriber line of a subscriber,

for example of the employee of the bank in the banking service center, or an operator's position, for example of a call center, are also to be imagined as being connected to the telecommunications switching office VST B.

It will be assumed that there is an active three-party telecommunications connection between the subscriber line of the telecommunications switching office VST A, the subscriber line or the operator's position of the telecommunications switching office VST B and the subscriber line of the telecommunications switching office VST C. The feature of the conversion of the three-party telecommunications connection into a two-party telecommunications connection is then activated ~~by means of~~ via a message FAC1 (FAC = feature activation) in the switching office VST B. The telecommunications switching office VST B then informs the telecommunications switching office VST C, ~~by means of~~ via the message FAC2, that the conversion of the three-party telecommunications connection has been activated. In this case, the subscriber whose subscriber line is connected to the telecommunications switching office VST A pays the toll for the direct telecommunications connection which is to be newly set up between the telecommunications switching offices VST A and VST C.

If the subscriber whose subscriber line is connected to the telecommunications switching office VST C is to pay the toll, the telecommunications switching office VST A can be informed about the conversion ~~by means of FAC2~~ via the message FAC2. The following sequence of the method according to the present invention is then to be imagined as if the references VST A and VST C were interchanged in the figure. Figure 1.

The telecommunications switching office VST C transmits, in the message FAC3, a uniquely defined ringing signal, together with the call number of the subscriber line connected to it, to the telecommunications switching office VST B which forwards to the telecommunications switching office VST A a request message FAC4 to set up a new direct telecommunications connection by reference to the transferred call number relating to the telecommunications switching office VST C, said the request message FAC4 containing the ringing signal and the call number. The receipt of the message FAC4 is confirmed by the telecommunications switching office VST A by the message FAC5 to the telecommunications switching office VST B. The setup of the new telecommunications connection is signaled to the telecommunications

switching office VST C ~~by means of~~ via the message IAM (Initial Address Message). This message also contains the ringing signal allocated by the telecommunications switching office VST C. In the telecommunications switching office VST C, the ringing signal transferred in the message IAM is now compared with the ringing signals of all the connections which have been activated in the telecommunications switching office VST C. After the section of the connection between the telecommunications switching office VST B and the subscriber line or operator's position connected to the telecommunications switching office VST C has been determined, the telecommunications switching office VST C responds with the message ANM (Answer Message) to the telecommunications switching office VST A.

If the telecommunications switching office VST C was not able to find a connection with an identical ringing signal, the procedure for setting up the new direct telecommunications connection to the telecommunications switching office VST C is aborted.

As soon as the telecommunications switching office VST A has received the message ANM, the new direct telecommunications connection is switched through to the telecommunications switching office VST C. At the same time, the user channel of the active section of the connection between the subscriber line connected to the telecommunications switching office VST A and the telecommunications switching office VST A, and the user channel of the active section of the connection between the subscriber line connected to the telecommunications switching office VST C and the telecommunications switching office VST C are respectively connected to the user channel of the newly set-up telecommunications connection. The section of the connection to the telecommunications switching office VST B is then released from the telecommunications switching office VST A, and the section of the connection to the telecommunications switching office VST B is then released from the telecommunications switching office VST C, and the assigned resources are thus made available. The release of the section of the connection between the telecommunications switching office VST B and the subscriber line connected to this telecommunications switching office is then also initiated ~~by means of~~ via the message DISC.

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If the setup of the new direct telecommunications connection fails in the method owing to a fault, the existing sections of the connections between the telecommunications switching office VST A and the telecommunications switching office VST B as well as those between the telecommunications switching office VST B and the telecommunications switching office VST C are maintained, connected together in the telecommunications switching office VST B and only the section of the connection between the telecommunications switching office VST B and its subscriber line is released.

If the telecommunications switching offices VST A and VST C are combined in one telecommunications switching office, the method operates similarly to the manner described above. The connection setup of the new direct telecommunications connection is then not carried out between the telecommunications switching offices VST A and VST C but rather processed internally in the single telecommunications switching office and the user channels of the sections of the connections to the two subscriber lines connected to this telecommunications switching office are connected together internally.

Although the present invention has been described with reference to specific embodiments, those of skill in the art will recognize that changes may be made thereto without departing from the spirit and scope of the invention as set forth in the hereafter appended claims.

ABSTRACT OF THE DISCLOSURE

~~Method A method~~ for converting a three-party telecommunications connection which is switched via the public communications network into a two-party telecommunications connection wherein, after ~~After~~ the telecommunications switching office (VST B), via which a three-party telecommunications connection between two subscriber lines and a further subscriber line or between two subscriber lines and an operator's position is routed, has received a request from the further subscriber line or the operator's position, a new direct telecommunications connection is set up between the two ~~aforesaid~~ subscriber lines and the existing sections of the three-party telecommunications connection between these two subscriber lines and the further subscriber line or the operator's position are released.

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Description

Method for converting a three-party telecommunications connection which is switched via the public communications network into a two-party telecommunications connection

The invention relates to a method for converting a three-party telecommunications connection, which is switched via a public communications network, between two subscriber lines and a further subscriber line or between two subscriber lines and an operator's position, into a two-party telecommunications connection between the two aforesaid subscriber lines according to the preamble of patent claim 1. The three-party telecommunications connection is routed here via the telecommunications switching office to which the further subscriber line or the operator's position is connected.

The conversion of a three-party telecommunications connection into a two-party telecommunications connection is carried out in a known fashion by releasing the section of the three-party telecommunications connection between the further subscriber line or the operator's position and its telecommunications switching office. The known method is applied, for example, in the case in which a subscriber of the telecommunications network, for example a customer of a bank, wishes to set up a connection to an employee of a bank at a bank branch. The connection setup to the employee of the bank is processed, for example, as follows:

The customer of the bank sets up a connection from his subscriber terminal to his local switching office, for example in Munich. From this local switching office, a connection is switched to a further telecommunications switching office, for example in Hamburg, on the basis

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of a call divert which is set up in the local switching office, a plurality of operators's positions, for example of a call center, being connected to said further telecommunications switching office. The
5 connection is finally switched from the telecommunications switching office in Hamburg to an operator's position.

A switching operator at the operator's position then searches for the call number of the employee of the bank requested by the customer of the bank and initiates a connection setup from the
5 telecommunications switching office in Hamburg to the same local switching office in Munich or to another local switching office to which the individual subscriber lines of the employees of the bank are connected. From this local switching office, the
10 connection is finally switched through to the requested employee of the bank. After a successful connection setup from the customer of the bank to the requested employee of the bank, the switching operator brings about the conversion into a two-party
15 telecommunications connection, the operator's position being released from the connection.

The known method is also applied to the case of a multiparty service. For this purpose, the customer of the bank calls, for example, an employee of the bank at a banking service center in Hamburg. This employee of the bank then establishes a three-party multiparty service connection to a further employee of a bank branch, for example in Munich. After a certain period of time during the call, the employee of the banking service center is released from the three-party multiparty service connection, and in his local switching office in Hamburg he brings about the interconnection of the section of the connection between the customer of the bank and the telecommunications switching office in Hamburg and the section of the connection between the telecommunications switching office in Hamburg and the employee of the bank branch in Munich. In this way, a two-party connection is maintained between the customer of the bank and the employee of the bank branch in Munich.

In the known method, there is however the disadvantage

for the bank that when there is a call divert to an operator's station, for example in Hamburg, the bank has to pay for the existing telecommunications connection between the local switching office in Munich
5 and the telecommunications switching office in Hamburg despite the fact that once the operator's position has been released from the three-party connection there is then only a call connection to the employee

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at the Munich branch of the bank. If there is a call transfer by the employee of the banking service center, the customer of the bank has to pay the tolls for the long-distance connections between his local switching office and the telecommunications switching office in Hamburg as well as between the remote switching office in Hamburg and the local switching office, for example in Munich, which is responsible for the bank branch.

- 10 Furthermore, additional resources, for example in the form of channel assignments on the connection lines and/or for the switching operation, in the telecommunications switching office itself are used up for the long-distance connections via the
- 15 telecommunications switching office in Hamburg.

- A method for carrying out a connection setup for a call diversion or connection forwarding in a communications network is already known (DE 196 53 622 A1). Here, when
- 20 there is a call from a subscriber's station of a first communications system to a subscriber's station which is assigned to a second communications system and for which a call diversion or at which a call forwarding to a subscriber's station of a third communications system
- 25 is set up or brought about, a connection to the third communications system is firstly set up via the second communications system. An equivalent path inquiry is then transmitted from this third communications system to the calling, first communications system, in
- 30 response to which said first communications system determines an alternative connection path (bypassing the second communications system) and causes the third communications system to change over to the alternative connection path. However, such a procedure is not
- 35 readily suitable for converting the three-party telecommunications connection described above into a

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two-party telecommunications connection.

AMENDED SHEET

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The object of the invention is then to configure a method of the type mentioned at the beginning to the effect that the disadvantages explained above are eliminated.

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This object is achieved by means of the features specified in the characterizing part of claim 1. Further embodiments of the invention are characterized in subclaims.

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The principle of the invention consists in the fact that the telecommunications switching office via which the three-party telecommunications connection between the two subscriber lines, for example the subscriber line of the customer of the bank mentioned at the beginning and the subscriber line of the employee of the bank mentioned at the beginning in the bank branch, and a further subscriber line, for example of the employee of the bank in the banking service center, or an operator's position, for example of a call center, is set up, receives a request from the further subscriber line or from the operator's position and in response initiates the setting up of a new direct telecommunications connection between the two aforesaid subscriber lines (for example customer of a bank and employee of a bank in the bank branch) by virtue of the fact that the telecommunications switching office which is connected to the further subscriber line or the operator's position requests the one switching office, or one of the two switching offices, to which the two aforesaid subscriber lines are connected to set up the new telecommunications connection in accordance with a selection which is made as a function of the tariff model which forms the basis of the billing system. Furthermore, after the direct telecommunications connection has been successfully set up, the existing

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sections of the three-party telecommunications
connection between these two subscriber lines and the
further subscriber line or the operator's position are
released. In this way, the subscribers can determine
5 whether the originally calling subscriber pays the
tolls for the new direct subscriber connection or
whether the originally called subscriber pays the tolls
for the new direct telecommunications

connection which is then set up from his telecommunications switching office.

5 Accordingly, a saving is made in resources, for example in the form of channel assignments upon transmission lines and/or for switching operations, in the telecommunications switching office to which the further subscriber or the operator's position is connected.

10 For the subscriber, for example the bank mentioned at the beginning, which makes use of the switching service by means of an operator's position, for example a call center, and for the calling subscriber in the case of
15 the aforesaid three-party multiparty service connection, there is the welcome benefit that after the conversion of the three-party telecommunications connection into the two-party telecommunications connection both of them only have to pay the tolls for
20 the direct telecommunications connection to the called subscriber.

One development of the invention discloses an alternative insofar as the two subscriber lines between
25 which a new direct telecommunications connection is set up are connected to a common telecommunications switching office. Here, the new direct telecommunications connection must merely be switched in the common telecommunications switching office.
30 Moreover, the calling subscriber, or the subscriber making use of the switching service, only pays tolls at the local rate in this case.

According to one development of the invention, the
35 telecommunications switching office which is requested to set up the new telecommunications connection

receives a uniquely defined ringing signal and/or the call number of the second subscriber line from the telecommunications switching office which accepts the new telecommunications connection and to which the second called subscriber line of the two aforesaid subscriber lines is connected. The new direct telecommunications connection is thus uniquely identified before the connection setup, as a result of which a correct useful channel switch-over is also ensured in the telecommunications switching office which initiates the new telecommunications connection and in the telecommunications switching office which accepts the new telecommunications connection. Moreover, this permits the correct call number of the called subscriber of the two-party telecommunications connection to be indicated in the subscriber terminal of the calling subscriber.

An exemplary embodiment of the invention will be explained in more detail below with reference to a drawing.

The figure shows an exemplary flow chart relating to the method according to the invention, in which:

A telecommunications switching office VST A, a telecommunications switching office VST B and a telecommunications switching office VST C are illustrated.

The subscriber line of the calling subscriber, for example of the customer of a bank, is to be imagined as being connected to the telecommunications switching office VST A, and the subscriber line of the called subscriber, for example of the employee of the bank branch, is to be imaged as being connected to the telecommunications switching office VST C. A further subscriber line of a subscriber, for example of the employee of the bank in the banking service center, or an operator's position, for example of a call center, are also to be imagined as being connected to the telecommunications switching office VST B.

It will be assumed that there is an active three-party
15 telecommunications connection between the subscriber
line of the telecommunications switching office VST A,
the subscriber line or the operator's position of the
telecommunications switching office VST B and the
subscriber line of the telecommunications switching
20 office VST C. The feature of the conversion of the
three-party telecommunications connection into a two-
party telecommunications connection is then activated
by means of a message FAC1 (FAC = feature activation)
in the switching office VST B. The telecommunications
25 switching office VST B then informs the
telecommunications switching office VST C, by means of
the message FAC2, that the conversion of the three
party telecommunications connection has been activated.
In this case, the subscriber whose subscriber line is
30 connected to the telecommunications switching office
VST A pays the toll for the direct telecommunications
connection which is to be newly set up between the
telecommunications switching offices VST A and VST C.

35 If the subscriber whose subscriber line is connected to the telecommunications switching office VST C is to pay the toll, the telecommunications switching office VST A can be informed about the conversion by means of FAC2.

The following sequence of the method according to the invention is then to be imagined as if the references VST A and VST C were interchanged in the figure.

- 5 The telecommunications switching office VST C transmits, in the message FAC3, a uniquely defined ringing signal, together with the call number of the subscriber line connected to it,

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to the telecommunications switching office VST B which forwards to the telecommunications switching office VST A a request message FAC4 to set up a new direct telecommunications connection by reference to the transferred call number relating to the telecommunications switching office VST C, said request message FAC4 containing the ringing signal and the call number. The receipt of the message FAC4 is confirmed by the telecommunications switching office VST A by the message FAC5 to the telecommunications switching office VST B. The setup of the new telecommunications connection is signaled to the telecommunications switching office VST C by means of the message IAM (Initial Address Message). This message also contains the ringing signal allocated by the telecommunications switching office VST C. In the telecommunications switching office VST C, the ringing signal transferred in the message IAM is now compared with the ringing signals of all the connections which have been activated in the telecommunications switching office VST C. After the section of the connection between the telecommunications switching office VST B and the subscriber line or operator's position connected to the telecommunications switching office VST C has been determined, the telecommunications switching office VST C responds with the message ANM (Answer Message) to the telecommunications switching office VST A.

If the telecommunications switching office VST C was not able to find a connection with an identical ringing signal, the procedure for setting up the new direct telecommunications connection to the telecommunications switching office VST C is aborted.

As soon as the telecommunications switching office VST A has received the message ANM, the new direct telecommunications connection is switched through to the telecommunications switching office VST C. At the same time, the user channel of the active section of

- the connection between the subscriber line connected to the telecommunications switching office VST A and the telecommunications switching office VST A, and the user channel of the active section of the connection between
- 5 the subscriber line connected to the telecommunications switching office VST C and the telecommunications switching office VST C are respectively connected to the user channel of the newly set-up

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telecommunications connection. The section of the connection to the telecommunications switching office VST B is then released from the telecommunications switching office VST A, and the section of the connection to the telecommunications switching office VST B is then released from the telecommunications switching office VST C, and the assigned resources are thus made available. The release of the section of the connection between the telecommunications switching office VST B and the subscriber line connected to this telecommunications switching office is then also initiated by means of the message DISC.

If the setup of the new direct telecommunications connection fails in the method owing to a fault, the existing sections of the connections between the telecommunications switching office VST A and the telecommunications switching office VST B as well as those between the telecommunications switching office VST B and the telecommunications switching office VST C are maintained, connected together in the telecommunications switching office VST B and only the section of the connection between the telecommunications switching office VST B and its subscriber line is released.

If the telecommunications switching offices VST A and VST C are combined in one telecommunications switching office, the method operates similarly to the manner described above. The connection setup of the new direct telecommunications connection is then not carried out between the telecommunications switching offices VST A and VST C but rather processed internally in the single telecommunications switching office and the user channels of the sections of the connections to the two subscriber lines connected to this telecommunications switching office are connected together internally.

Patent Claims

1. A method for converting a three-party telecommunications connection, which is switched via a public communications network, between two subscriber lines and a further subscriber line or between two subscriber lines and an operator's position, the three-party telecommunications connection being routed via the telecommunications switching office (VST B) to which the further subscriber line or the operator's position is connected, into a two-party telecommunications connection between the two aforesaid subscriber lines, characterized in that the telecommunications switching office (VST B) to which the further subscriber line or the operator's position is connected initiates, after the reception of a request originating from the further subscriber line or from the operator's position, the setup of a new direct telecommunications connection between the two aforesaid subscriber lines by virtue of the fact that the telecommunications switching office (VST B) connected to the further subscriber line or the switching office requests one of the two telecommunications switching offices (VST A) to which the two aforesaid subscriber lines are respectively connected to set up the new telecommunications connection in accordance with a selection which is made as a function of the tariff model which forms the basis of the billing system, and that after a successful setup of the direct telecommunications connection the existing sections of the three-party telecommunications connection which is routed via this telecommunications switching office (VST B) are released between these two subscriber lines and

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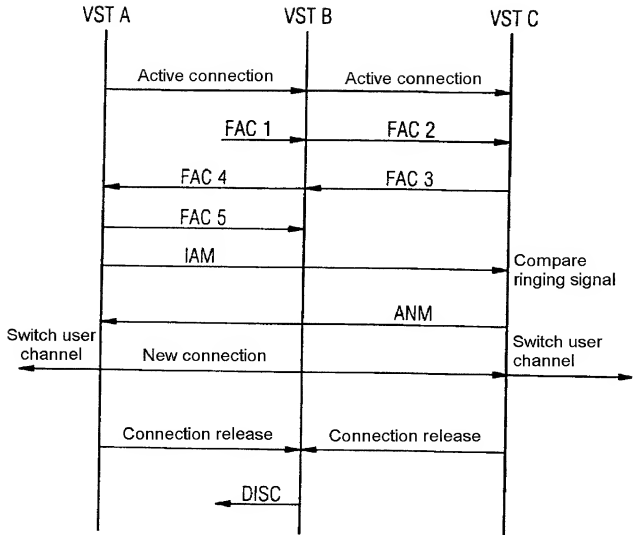
the further subscriber line or the operator's position.

2. The method as claimed in claim 1, characterized in
5 that the two aforesaid subscriber lines between
which a new direct telecommunications connection
is set up

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are connected to a common telecommunications switching office (VST A and VST C).

3. The method as claimed in claim 1 or 2,
5 characterized in that the telecommunications switching office (VST A) which is requested to set up the new telecommunications connection receives a uniquely defined ringing signal and/or the call
10 number of the second subscriber line from the telecommunications switching office (VST C) which accepts the new telecommunications connection and to which the second subscriber line of the two aforesaid subscriber lines is connected.



Declaration and Power of Attorney For Patent Application**Erklärung Für Patentanmeldungen Mit Vollmacht****German Language Declaration**

Als nachstehend benannter Erfinder erkläre ich hiermit an Eides Statt:

dass mein Wohnsitz, meine Postanschrift, und meine Staatsangehörigkeit den im Nachstehenden nach meinem Namen aufgeführten Angaben entsprechen,

dass ich, nach bestem Wissen der ursprüngliche, erste und alleinige Erfinder (falls nachstehend nur ein Name angegeben ist) oder ein ursprünglicher, erster und Miterfinder (falls nachstehend mehrere Namen aufgeführt sind) des Gegenstandes bin, für den dieser Antrag gestellt wird und für den ein Patent beantragt wird für die Erfindung mit dem Titel:

Verfahren bei Umwandlung einer Dreierfermeldeverbindung in eine Zweierfermeldeverbindung

deren Beschreibung

(zutreffendes ankreuzen)

☐ hier beigefügt ist.

☒ am 12.05.2000 als

PCT internationale Anmeldung

PCT Anmeldungsnummer PCT/DE00/01505

eingereicht wurde und am

abgeändert wurde (falls tatsächlich abgeändert).

Ich bestätige hiermit, dass ich den Inhalt der obigen Patentanmeldung einschliesslich der Ansprüche durchgesehen und verstanden habe, die eventuell durch einen Zusatzantrag wie oben erwähnt abgeändert wurde.

Ich erkenne meine Pflicht zur Offenbarung irgendwelcher Informationen, die für die Prüfung der vorliegenden Patentanmeldung in Einklang mit Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) von Wichtigkeit sind, an.

Ich beanspruche hiermit ausländische Prioritätsvorteile gemäss Abschnitt 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 119 aller unten angegebenen Auslandsanmeldungen für ein Patent oder eine Erfindersurkunde, und habe auch alle Auslandsanmeldungen für ein Patent oder eine Erfindersurkunde nachstehend gekennzeichnet, die ein Anmeldedatum haben, das vor dem Anmeldedatum der Anmeldung liegt, für die Priorität beansprucht wird.

As a below named inventor, I hereby declare that

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

Path replacement during the conversion of a three-party telecommunications connection into a two-party telecommunications connection

the specification of which

(check one)

☐ is attached hereto.

☒ was filed on 12.05.2000 as

PCT international application

PCT Application No. PCT/DE00/01505

and was amended on _____ (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

German Language Declaration

Prior foreign applications
Priorität beansprucht

Priority Claimed

19922554.0

DE

17.05.1999

(Number)
(Nummer)

(Country)
(Land)

(Day Month Year Filed)
(Tag Monat Jahr eingereicht)

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Yes
Ja

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No
Nein

(Number)
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Yes
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No
Nein

Ich beanspruche hiermit gemäss Absatz 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 120, den Vorzug aller unten aufgeführten Anmeldungen und falls der Gegenstand aus jedem Anspruch dieser Anmeldung nicht in einer früheren amerikanischen Patentanmeldung laut dem ersten Paragraphen des Absatzes 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 122 offenbart ist, erkenne ich gemäss Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) meine Pflicht zur Offenbarung von Informationen an, die zwischen dem Anmeldedatum der früheren Anmeldung und dem nationalen oder PCT internationalen Anmeldedatum dieser Anmeldung bekannt geworden sind.

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §122, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

PCT/DE00/01505

(Application Serial No.)
(Anmeldeseriennummer)

12.05.2000

(Filing Date D, M, Y)
(Anmeldedatum T, M, J)

anhängig

(Status)
(patentiert, anhängig,
aufgegeben)

pending

(Status)
(patented, pending,
abandoned)

(Application Serial No.)
(Anmeldeseriennummer)

(Filing Date D,M,Y)
(Anmeldedatum T, M, J)

(Status)
(patentiert, anhängig,
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(Status)
(patented, pending,
abandoned)

Ich erkläre hiermit, dass alle von mir in der vorliegenden Erklärung gemachten Angaben nach meinem besten Wissen und Gewissen der vollen Wahrheit entsprechen, und dass ich diese eidesstattliche Erklärung in Kenntnis dessen abgebe, dass wissentlich und vorsätzlich falsche Angaben gemäss Paragraph 1001, Absatz 18 der Zivilprozessordnung der Vereinigten Staaten von Amerika mit Geldstrafe belegt und/oder Gefängnis bestraft werden können, und dass derartig wissentlich und vorsätzlich falsche Angaben die Gültigkeit der vorliegenden Patentanmeldung oder eines darauf erteilten Patentes gefährden können.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

German Language Declaration

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POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (list name and registration number)

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Voller Name des einzigen oder ursprünglichen Erfinders: VOLKER HENZ i - co		Full name of sole or first inventor: VOLKER HENZ	
Unterschrift des Erfinders <i>Volker Henz</i>	Datum 16.10.2001	Inventor's signature <i>Volker Henz</i>	Date 16.10.2001
Wohnsitz OBERSCHLEISSHEIM, DEUTSCHLAND		Residence OBERSCHLEISSHEIM, GERMANY Dex	
Staatsangehörigkeit DE		Citizenship DE	
Postanschrift THEODOR-HEUSS-STR. 31 85764 OBERSCHLEISSHEIM		Post Office Address THEODOR-HEUSS-STR. 31 85764 OBERSCHLEISSHEIM	
Voller Name des zweiten Miterfinders (falls zutreffend): BERNHARD KREMBES 2 - co		Full name of second joint inventor, if any: BERNHARD KREMBES	
Unterschrift des Erfinders <i>Bernhard Krembs</i>	Datum 16.10.2001	Second inventor's signature <i>Bernhard Krembs</i>	Date 16.10.2001
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(Bitte entsprechende Informationen und Unterschriften im Falle von dritten und weiteren Miterfindern angeben).

(Supply similar information and signature for third and subsequent joint inventors).